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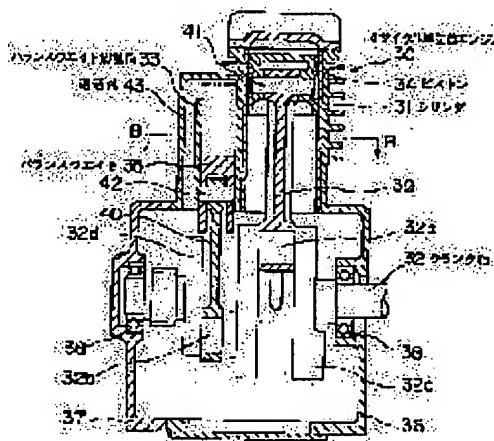
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(54) BALANCER DEVICE FOR SINGLE CYLINDER ENGINE

(57)Abstract:

PURPOSE: To obtain a small-sized and simple constitution by installing a balance weight sliding cylinder installed integrally with a cylinder, balance weight which is made of the material having a large specific gravity and moves in reciprocation in the sliding cylinder, with a phase difference of 180° for a piston, and a return passage to the inside of a crankcase which communicates to the sliding cylinder.

CONSTITUTION: A balance weight sliding cylinder 33 is installed integrally in close to and in parallel to a cylinder 31, and a balance weight 35 is gently fitted inside the sliding cylinder 33, and the product of the weight of the weight 35 and the revolution radius of a crank pin 32b is made equal to the product of the weight of a piston 34 and the revolution radius of a crank pin 32a. In order to obtain the compact constitution of the sliding cylinder 33 and the balance weight 35, the weight 35 is made of the material having a large specific gravity. A communication hole 43 permits the communication between the upper part of the sliding cylinder 33 and the inside of a crank case 36. The primary vibration due to the reciprocating movement of the piston 34 can be absorbed by the weight 35 which moves in reciprocation, having the phase shifted by 180° . With this constitution, a balancer device can be accommodated in small-sized and compact form, and also the whole of an engine can be made small-sized and compact.



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